iOS 10 first impressions: Cleaner, clearer, and more convenient



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With iOS 10, iPhone and iPad are about to get a bigger, bolder,

and more brilliant makeover — in more ways than one.

iOS 7 was a complete redesign, wiping away rich textures and putting physics-based interactions in its place. iOS 8 was a functional revolution, decoupling features and activities from apps and letting them extend into other interfaces and continue across devices. iOS 9 introduced intelligence and proactivity, making the system and apps smarter from server to search. Now, iOS 10 takes the next step, using all of the advances that came before to make messaging more fun and flexible, Siri more open and accessible, notifications more persistent and convenient, and the entire experience cleaner and clearer.

Apple's 2016 software updates — <u>iOS 10</u>, <u>watchOS 3</u>, <u>tvOS 10</u>, and <u>macOS Sierra</u> — are currently available as closed developer previews and as <u>public betas</u> for iPhone, iPad, and Mac. While the betas contain new features, they also contain pre-release bugs that can prevent the normal use of your iPhone, iPad, Apple Watch, Apple TV, or Mac, and are not intended for everyday use on a primary device. That's why we strongly recommend staying away from the developer previews, and using the public betas with caution. If you depend on your devices, wait for the final release

this fall.

iOS 10 Compatibility

Apple didn't go so far as to exclude all 32-bit devices from iOS 10 compatibility, but they did drop several older models from the list, including all non-Retina display devices.

- 1 iPhone SE
- 2 iPhone 6s
- 3 iPhone 6s Plus
- 4 iPhone 6
- 5 iPhone 6 Plus
- 6 iPhone 5s
- 7 iPhone 5c
- 8 iPhone 5
- 9 iPad Pro 9.7-inches
- 10 iPad Pro 12.9-inches
- 11 iPad Air 2
- 12 iPad Air
- 13 iPad 4
- 14 iPad mini 4
- 15 iPad mini 3
- 16 iPad mini 2
- 17 iPod touch 6

Lock screen, notifications, and controls

"Slide to unlock", a gesture that helped define the original iPhone experience, is gone. "Press home to unlock" — or "Press home to open" if you've authenticated with Touch ID — has replaced it. It was a little confusing at first, but once you get used to the

other lock screen changes, it just feels right.







Like Apple Watch, iOS now wakes up when you lift it, which is great. You can see all your notifications right away, without having to worry about blasting past them with Touch ID. Unlike Apple Watch, though, it doesn't wake up when you tap it, which would make it even better.

Swipe right from the lock screen and you now get the Camera app. It makes taking photos and video faster and less fumbly than the old swipe-up-from-the-bottomright-icon implementation. I like it so much I don't even feel the need for a hardware trigger any more. I also like that the camera switch button — the one that brings up the selfie cam — is now bottom right. Swipe left and you go into widget-space. It's convenient if easy access to glanceable data outweighs any security concerns you might have. (Otherwise, as always, you can disable lock screen features in Settings.) Widgets have also taken over the "minus one" home screen and retained occupancy of the left tab in Notification Center as well. I prefer them there since I can pull them down from anywhere, use them, and go right back to what I was doing. Having widgetspace always to the left on the lock screen, home screen, and in notification center makes for an incredibly consistent experience, though, and one I didn't fully appreciate until I found myself swiping into them, no matter where I was, without even thinking about it.

The widgets, themselves, have been redesigned. It's part of iOS 10's new bigger, bolder, more brilliant visual language. Information density has gone down, but legibility has gone up. The aggressive corner radius combined with the background no longer dimming behind the widgets and notifications can make things

distracting when you scroll, though, as the fully lit wallpaper flickers brightly from behind.

The best part is that, with 3D Touch — or, eventually, long press — widgets can expand to show even more and richer content, up to and including images, app interfaces, and videos. Notification-space has even become persistent. So, now you can carry on a short conversation without having to bounce back and forth between what you're doing and what you're saying, or jump to another app and then have to jump back. A longstanding pain point has also been addressed in iOS 10: You can 3D Touch the clear button to delete all notifications, just like Apple Watch. Hallelujah.





Control Center has been redesigned, and it, too, sacrifices density for legibility. In this case, though, I'm not sure the tradeoff is as worthwhile. Instead of a single pane there are now three panes, one for settings and tools, one for media controls, and one for HomeKit. You swipe between them and it feels... slow. I'm not sure if a tabbed representation, like notification center, would feel faster, or if I'll just get used to it with time. The addition of 3D Touch shortcuts, though, really rounds out the options. You still can't swap out the

settings or change the tools, which would be nice, but you can get to specific and additional functions faster, like different intensities for the flashlight or common timer lengths. It's useful enough I hope Apple builds it out further in the future.

Last year some insisted on calling 3D Touch a "gimmick". It was really an experiment. Flat, single column multitouch interfaces have very real speed limits and 3D Touch sought to literally add a transdimensional tunnel through them: press your way from one view or app and into another.

Since 3D Touch isn't ubiquitous across devices, though, it can't be mandatory and so it's harder to make it a habit. That's why I'm not sure iOS 10 will change many hearts, even if the new functionality does make it even more attractive to try.

Messages

Messages, the most popular app on iOS, has been significantly updated for iOS 10. Quick selfies have moved from a touch-and-hold button to a live view in the photo picker. Digital Touch — sketches, heartbeats, and taps — has been brought over from the Apple Watch, and you can layer them on top of images and videos now as well. It makes Digital Touch available to an exponentially larger potential user base, but I'm not sure how many people will actually use it beyond some

initial experimentation. Not so with the new emoji.

They're going to be big. Literally.







Up to three emoji will now be displayed at three-times normal size, which sounds silly but is palpably more expressive. You can also "Tapback", to quickly tag a message with an emoji reaction, and "emojify" an entire message with just a few taps. Again, silly until you realize pictographic communication solves a real problem. Typing "Sorry, I'm running late" will create stress and get you in trouble. Sending a few emoji or a sticker will often get you empathy. It's strangely more human.

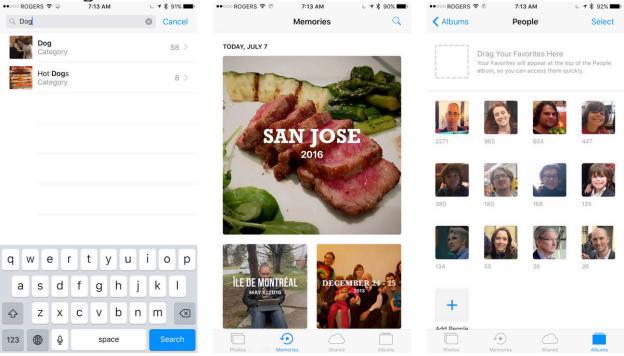
There's handwriting, which animates in for a personal touch. And when you do want to type, data detection and prediction have both been taken to the next level in the updated QuickType keyboard. Apple's branding it

as "Siri intelligence", the way it did Spotlight last year. Basically, it's like data detectors gone bi-directional (data anticipators?). Everything from location, to calendar, to contact information is offered right up, so you can enter it without having to go find it first. If you feel like you need extra emphasis, you can also add effects. You can make your messages slam down, or float in softly, or fill the screen with everything from balloons to lasers. And you can access iMessage apps, which will let you do everything from sending those stickers to collaborating on a food order. Only Apple's iMessage apps — iPhone and iPad versions of the Apple Watch animated emoji faces, hearts, and hands, and a classic sticker pack — are available for now, but more will follow. Especially since Stickers require no coding, just create the art or animation and upload. Messaging apps have evolved enormously since the days of SMS/MMS, IRC, and ICQ. They're now platforms in their own rights, and the major players command and consume enormous amounts of our attention. Making iMessage both more fun and more flexible was imperative not just for Apple, but for the people like myself who use it day in, day out.

Privacy and Photos

Apple believes privacy and security are key differentiators and points of attraction for the company's software and services, and lists them as major features as important as user experience. With iOS 10, Apple is again improving both with everything from encryption through extensions to differentiated privacy, which goes beyond anonymizing data to making sure no one, not even Apple, knows who the crowd is behind the crowd-

sourcing.



The company is also continuing to keep local data local, bringing public data sources down to the device rather than sucking your data up and operating on it in the cloud. It's a gamble because many people don't seem to be that concerned about sharing their personal data and will quickly trade it for convenience. Unlike money, which you see leaving your account or wallet, paying with data really does feel "free".

For those who do care, though, having an alternative to the big server companies is critical, especially when it comes to increasingly important technologies like deep learning, artificial intelligence, and computer vision. Apple is ramping up all of those in iOS 10. Nowhere is it more readily apparent, or will its success or failure be judged as easily, as in Photos.

Thanks to the power of Apple's custom processors, photos new and old are processed now and faces, places, and tens of thousands of object types are all identified and made available for search. It's worked pretty well for me so far, though it tends to err on the side of caution. You can also favorite, merge, hide, and otherwise manage the detection for faces, for example. I don't expect it to work as well as Google's cloud-side version. If it works well enough though — and until it ships and we really get to put it through its paces, that remains a big if — it's a tradeoff I'm more than happy to make if it means my stuff remains my stuff and isn't exposed to any potential abuse by anyone or anything else.

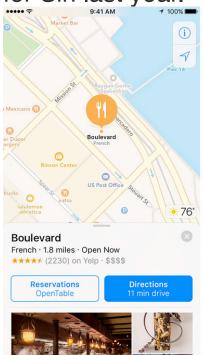
There's also a new Memories feature, which combines your images with music, titles, and transitions — all editable to fit your mood and pace. Both let you rediscover moments you might have otherwise forgotten about. It's already brought countless smiles to my face, and that's already made it invaluable. (Also great: Markup, Apple's annotation extension, is no longer restricted to mail. You can now doodle, callout, and otherwise add visuals or vandalize your

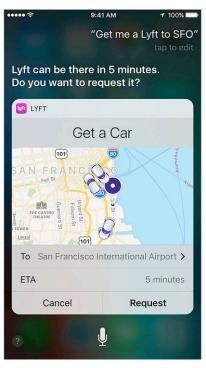
images right from Photos before sharing with the world.)

Maps and Siri apps

Maps has gotten a makeover and I'm still getting used to it. (I had the old version down to muscle memory.) A lot of it is good, especially the much bigger, easier to see destination recommendations and controls. And it's absolutely simpler to use. It's also getting the same kind of proactive predictions Apple started introducing

for Siri last year.







The bigger news is the opening up of Maps to apps. Just like Messages, the value of app integration might not be clear until you start using it. Then it's obvious. You no longer have to jump around between apps to

make reservations or book rides. You can do what you need to do right from where you already are.

It's incredibly important because the human brain is horrible at context changes. Switch apps and, more often than not, you forget why. Stay where you are, have the functionality brought to you, and you just keep on doing what you were doing. Apple's been driving the change from pull to push interface for years, and this brings us another step closer to it.

Siri, Apple's voice-controlled personal virtual assistant, is also getting app integration. It's been a long, long time coming but Apple's still taking it slow. It's limited to a half-dozen domains for now, including messaging, phone calls, photo search, ride booking, personal payments, and workouts, but Apple promises more domains will be added in the future. We'll have to wait and see how much developers can do with it, and how well it works, but the potential is enormous.

Since iOS 10 apps aren't yet available on the App Store, I couldn't test any of the apps, but what Apple is lacking in quantity they're clearly hoping to make up for in ubiquity and quality. Siri already supports multiple languages in multiple regions, is available on a wide range of devices, and it allows you to pose questions and commands using a wide variety of sentence structures.

You don't really notice how important that is until you leave your home, switch from phone to tablet, travel

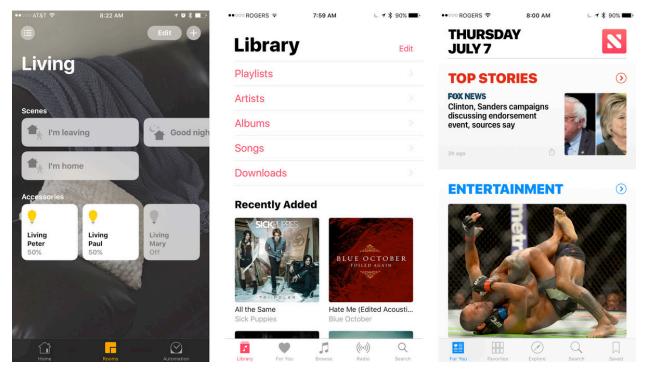
internationally, or simply speak without having to worry about putting the right word in the right place. Then it's everything.

Perhaps the most surprising bit of new openness from Apple comes in the form of messaging and VoIP integration at the contact level. You can access both types of apps through Siri now — every app name is about to become a verb, get used to it! — but also though any other part of the system. And the defaults you set through Contacts get full access to everything, including the lock screen and dialer, just as though they were Apple's own. So, if your best PC friend prefers Skype and your cousin in Europe only uses WhatsApp, you can set them just so.

Since messaging and VoIP are so fragmented, with different regions blanketed with different services, it's impossible to overstate how big a deal this is. Not the least of which in what it will mean for carriers going forward.

Home, Music, and News

Music and News have gotten complete makeovers in iOS 10, and the new Home app joins them in being "big, bold, and beautiful." My colleague, Serenity Caldwell, has already done a deep dive into the new design language, and the new Music app in specific, so I'm going to focus here on my experience with them so far.



For me, HomeKit has always been incredibly easy to access via Siri, but not at all easy to manage via the apps offered by accessory makers. So, I quickly sought out and found a third-party HomeKit management app. But I shouldn't have had to. Just like Apple's Health app serves as a requisite front end to HealthKit, a Home app has always seemed just as necessary for HomeKit. And now it's here.

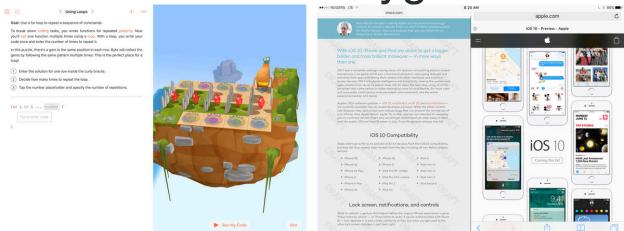
It benefits — or suffers, depending on your point of view — from the new design language's more open, expansive style. I find it somewhere in the middle. It's easy to understand and access, but it does require a lot of swiping, especially if you have many rooms set up, like I do.

Some of the choices seem counterintuitive. What looks like the location button in Maps is used in Home to

open what looks like settings. The button is actually labeled "show locations", which makes logical sense, but still comes off as visually confusing. The features are fully fleshed out and the management options are powerful, however. Thanks to the new Home app I'm using HomeKit more than ever, including really exploring automations for the first time. Music walks back some of the complexity of the previous redesign and puts your personal content frontand-center. I still access Apple Music almost exclusively through Siri, so very little changes for me, but when I do dive in it's apparent the app is still trying to be too many things to too many people. Connect has been buried, playlists have been improved, but I still think Music lacks the strong opinion exemplified by Apple's best apps. Regardless, it's a step in the right direction.

News has made significant progress since last time. I got part of my wish with News now replacing the recommended news widget, but I'd still love to see Safari reading list and shared links integrated as well. That would make the experience complete. For You is cleverer now and the sections more clearly organized. News also allows for subscriptions for the first time. Monetizing publications is becoming horrifically difficult these days, and I'm not optimistic that anyone, Apple included, can really change that. But, the more options, the better.

iPad and Swift Playgrounds



iPad doesn't fare as well this year as last. Safari can now go into Split View all by itself, either via a long press, a two-finger tap, or dragging a tab to the right edge of the screen. It works great. You can still go into multi-app Split View from Safari Split View. It'll collapse Safari back down to a single window but come right back to where you left it when you return.

There are a few other new features, like a redesigned Camera app, but nothing approaching the level of "pro" that we got in iOS 9. No drag-and-drop, for example. My guess is that Apple isn't forgetting about iPad differentiation but is simply staggering it. iOS 10.0 is about updating everything, and more iPad-specific features will follow in a future update.

That said, there is one monumental new iPad feature, in the form of an app: Swift Playground. It's absolutely not Xcode for iOS, but it could be something even more important. Not since Hypercard has there been as

powerful a way to get people familiar with code, and there's never been one offering well-integrated educational content like Playgrounds.

The potential for both the app and the ecosystem is tremendous, and my guess is its announcement will go down as one of the most important moments in programming for the next generation.

Bottom line

iOS 10 will no doubt be called iterative and, whether it's intended as a compliment or not, it should be taken as one. Iteration is important, critical even, to improving experience and functionality both. With the redesign done, the new architecture in place, and the intelligence improving, Apple is taking an almost decade-old operating system and making it fresh, fun, and futuristic again.

There are still silos — I yearn for universal VIP. There are still gaps — handoff for media can't come fast enough. There's still stability that has to be proven and proven again with every update.

So, final judgment has to be reserved for this fall, when the new operating system ships. For now, though, iOS 10 is a better experience that's making not just my day-to-day, but moment-to-moment interactions more efficient and more enjoyable. I like the direction its going, even and especially where it's been opened up in new and surprising ways.

Now we just need to wait for it to ship, and to see what developers do with all the new toys.